

REMARKS

This Amendment is in response to the Office Action mailed March 17, 2004. Enclosed herewith is a Petition requesting a one-month extension of time for resetting the deadline for responding to the Office Action from June 17, 2004 to and including July 17, 2004. As July 17, 2004 was a Saturday, the filing of the Amendment on Monday, July 19, 2004 is deemed to fall within the one-month extension period.

As an initial matter, Applicant notes that claim 1 has been amended to recite a connection component including "a fusible mass positioned atop the at least one of said conductive pads having the offset via opening, wherein said fusible mass is at least partially reflowed for permanently attaching said fusible mass to the at least one of said conductive pads and wherein the offset via opening is at least partially exposed." Support for the amendment to claim 1 is found in FIGS. 2A-2D and paragraphs [0025] - [0027] of the present application. By the present amendment, Applicants have also added new claims 11-17. Support for new claims 11-17 is also found in the specification at paragraphs [0012] - [0014] and [0025] - [0027].

In the Office Action, the Examiner rejected claims 1-10 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,706,178 to Barrow. Referring to FIGS. 2-5 thereof, Barrow discloses a package 10 having a substrate 14 with a first surface 16 and an opposite second surface 18. The first and second surfaces 16, 18 of the substrate have layers of copper that are etched into desired routing and bus patterns. The first surface 16 of the substrate 14 has a plurality of solder pads 20. The second surface 18 of the substrate 14 has a plurality of bonding pads 22. As shown in FIG. 4, the bonding pads 22 are connected to the solder pads 20 by vias 30. The vias 30 terminate within the area of the solder pads 20. A solder ball 36 is attached to each solder pad 20 by initially placing a ball onto the pad 20 using a vacuum chuck tooling device. The first surface 16 of the substrate 14 is in an upright position so that the solder balls 36 do not fall off of the substrate 14. The solder balls 36 are subsequently heated

so that the solder reflows and becomes attached to the solder pads 20. Thus, Barrow teaches that the solder balls are positioned over the via openings immediately before reflow. In contrast, the independent claims of the present application recite that the "via opening is at least partially exposed" when the fusible mass is reflowed. Specifically, claim 1 is unanticipated by Barrow because the cited reference neither discloses nor suggests a connection component including "a fusible mass positioned atop the at least one of said conductive pads having the offset via opening, wherein said fusible mass is at least partially reflowed for permanently attaching said fusible mass to the at least one of said conductive pads and wherein the offset via opening is at least partially exposed." Claims 2-10 are unanticipated, *inter alia*, by virtue of their dependence from claim 1 which is unanticipated for the reasons set forth above.

New independent claim 11 is unanticipated by Barrow because the cited reference neither discloses nor suggests a connection component including "a fusible mass in contact with the conductive pad, wherein said fusible mass does not completely obstruct said via opening so that said via opening is at least partially exposed." Claims 12-16 that depend from claim 11 are unanticipated, *inter alia*, by virtue of their dependent from claim 11.

New independent claim 17 is unanticipated by Barrow because the cited reference neither discloses nor suggests a connection component including "a flux material in contact with the conductive pad, wherein said flux material does not completely obstruct said via opening so that said via opening is at least partially exposed."

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

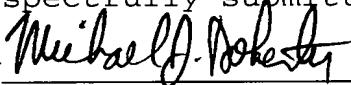
If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone Applicant's attorney at (908) 654-

5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: July 19, 2004

Respectfully submitted,

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